AMENDMENTS TO THE CLAIMS:

1. (Previously Amended) A Q-switched laser, comprising:

a polarization-dependent resonant cavity including a fiber chain having a gain medium between narrowband and broadband fiber gratings, at least one of said fiber gratings and said gain medium being formed in a non-polarization maintaining (PM) fiber;

a pump source that couples energy into the fiber chain to pump the gain medium; and

a modulator that applies stress to a non-PM portion of the fiber chain to induce birefringence and switch the cavity Q-factor to alternately store energy in the gain medium and then release the energy in a laser pulse.

2. (Original) The Q-switched laser of claim 1, wherein at least a portion of the fiber chain comprises a polarization-dependent fiber.

3. (Previously Amended) The Q-switched laser of claim 1, wherein the narrowband fiber grating is formed in a polarization maintaining (PM) fiber creating a pair of reflection bands that correspond to different polarization modes, said broadband grating is formed in the non-PM fiber having a reflection band that is aligned to one of the narrowband grating's reflection bands.

4. (Original) The Q-switched laser of claim 1, wherein the modulator comprises a piezoelectric transducer (PZT).

5. (Cancelled)

6. (Original) The Q-switched laser of claim 1, wherein

the retardance of the birefringence is approximately one-quarter wave of the laser pulse.

7. (Original) The Q-switched laser of claim 1, wherein the gain medium is formed in an oxide-based multi-component glass fiber and the gratings are formed in passive silica fiber fused at either end of the multi-component glass fiber.

8. (Original) The Q-switched laser of claim 1, wherein the length of the resonator is less than 5 cm and the laser pulse is single-frequency.

9. (Previously Amended) The Q-switched laser of claim 1, wherein full-width half-maximum of the laser pulse is less than 100 ns, the repetition rate of the laser pulse is at least 1 kHz, and the peak power of the laser pulse is at least 1 W.

10. (Previously Amended) The Q-switched laser of claim 1, wherein the modulator applies stress to the non-PM portion of the fiber chain that does not include the gain.

11. (Previously Amended) The Q-switched laser of claim 1 , wherein said fiber chain includes only contiguous section of PM fiber.

12. (Previously Amended) A Q-switched laser, comprising:

a polarization-dependent resonant cavity comprising,

a gain fiber,

a narrowband grating formed in a polarization maintaining (PM) fiber spliced to one end of the gain

fiber, said narrowband grating in said PM fiber having two reflection bands that correspond to different polarization modes,

a broadband grating formed in a non-PM fiber spliced to the other end of the gain fiber, said broadband grating having a reflection band that is aligned to one of the narrowband grating's reflection bands;

a pump source that couples energy into the resonant cavity to pump the gain fiber; and

a modulator that applies stress to the non-PM fiber in the fiber chain to induce birefringence and switch the cavity Q-factor to alternately store energy in the gain medium and then release the energy in a laser pulse.

13. (Previously Amended) The Q-switched laser of claim 12, wherein the resonant cavity comprises only one section of PM fiber.

14. (Previously Amended) The Q-switched laser of claim 13, wherein the one section of PM fiber comprises the PM fiber in which the narrowband grating is formed spliced to a PM gain fiber.

15. (Original) The Q-switched laser of claim 12, wherein the gain fiber is formed of an oxide-based multi-component glass and the gratings are formed in passive silica fiber fused at either end of the multi-component glass fiber.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Previously Amended) A Q-switched laser, comprising:

a resonant cavity including a narrowband reflector having a polarization-dependent reflection band centered at a laser wavelength, a gain medium and a broadband reflector having a reflection band that overlaps the polarization-dependent reflection band so that the cavity has a high Q-factor at the laser wavelength and polarization;

a pump source that couples energy into the resonant cavity to pump the gain medium; and

a modulator that affects the polarization of light oscillating in the resonant cavity to reduce the Q-factor to store energy in the gain medium and then return the Q-factor to its high value to release the energy in a laser pulse.

21. (Previously Amended) The Q-switched laser of claim 20, wherein the reflectors and gain medium are formed in a fiber chain, said modulator applying stress to a non-polarization maintaining portion of the fiber chain to alter its birefringence and change the polarization of the light.

22. (Previously Amended) The Q-switched laser of claim 20, wherein the narrowband reflector is formed in a polarization maintaining (PM) fiber creating a pair of reflection bands that correspond to different polarization modes, said broadband reflector having a reflection band that is aligned to one of the narrowband reflector's

reflection bands.

23. (Previously Presented) A Q-switched laser, comprising:

a polarization-dependent resonant cavity including a fiber chain having a gain medium between first and second fiber gratings, at least one of said gratings formed in a non-polarization maintaining (PM) fiber;

a pump source that couples energy into the fiber chain to pump the gain medium; and

a modulator that applies stress to a non-PM portion of the fiber chain to induce birefringence and switch the cavity Q-factor to alternately store energy in the gain medium and then release the energy in a laser pulse.

24. (Previously Presented) The Q-switched laser of claim 23, wherein one of the fiber gratings is formed in a PM fiber.

25. (Previously Presented) The Q-switched laser of claim 23, wherein the fiber chain includes only one section of PM fiber including said other grating and/or said gain medium.

26. (Previously Presented) The Q-switched laser of claim 24, wherein said first fiber grating is a narrowband grating that is formed in said PM fiber and said second fiber grating is a broadband grating that is formed in said non-PM fiber.

27. (Previously Presented) The Q-switched laser of claim 23, wherein the modulator applies stress to the non-PM portion of the fiber chain that does not include the gain medium.

Statement Concerning Common Ownership Under 35 USC 102(e)

Claims 1-4, 6-15, and 20-26 are currently pending.

Claims 1-4 and 7-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (US 6816514) in view of Cai et al. (Haiwen Cai; Xia Jiangzhen; Hao Zhao; Chen Gaoting; Fang Zujie; Kim I.S.; Optical Fiber Communication Conference and Exhibit, 2002. OFC 2002 17-22Mar 2002 Pages(s): 654-655).

The Jiang et al reference (US 6816514) only qualifies as prior art under 35 U.S.C. 102(e), and thus is subject to being disqualified under 35 U.S.C. 103(c) if the reference and the application were commonly owned, or subject to an obligation of the common assignment, at the time the invention was made.

MPEP 706.02(l)(2) states that applications and references will be considered by the examiner to be owned by, or subject to an obligation of assignment to the same person, at the time the invention was made, if the application(s) or an attorney or agent of record makes a statement to the effect that the application and the reference were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person or organization.

I, Eric A. Gifford, as an attorney of record, hereby state that application serial no. 10/633,014 and the subject matter and claimed invention therein and the Jiang et al. patent (US 6816514) were, at the time the invention of application serial no. 10/633,014 was made, wholly owned by, or subject to an obligation of assignment to NP Photonics, Inc.

Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below listed telephone number if, in the opinion of the Examiner, such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

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Date: October 5, 2005 ATTORNEY FOR APPLICANTS